

The curriculum design coherence model.

POUNTNEY, Richard <<http://orcid.org/0000-0002-5672-0811>>

Available from Sheffield Hallam University Research Archive (SHURA) at:

<http://shura.shu.ac.uk/27194/>

This document is the author deposited version. You are advised to consult the publisher's version if you wish to cite from it.

Published version

POUNTNEY, Richard (2020). The curriculum design coherence model. In: SELEZNYOV, Sarah and CZERNIAWSKI, Gerry, (eds.) UNSPECIFIED BERA, British Curriculum Forum, p. 17.

Copyright and re-use policy

See <http://shura.shu.ac.uk/information.html>

A RESEARCH APPROACH TO CURRICULUM DEVELOPMENT

A BRITISH CURRICULUM FORUM EVENT REPORT

Edited by Sarah Seleznyov &
Gerry Czerniawski



About BERA

The British Educational Research Association (BERA) is the home of educational research in the United Kingdom. We are a membership association committed to advancing knowledge of education by sustaining a strong and high quality educational research community.

Together with our members, BERA is working to advance research quality, build research capacity and foster research engagement.

Since its inception in 1974, BERA has expanded into an internationally renowned association with both UK and non-UK based members. It strives to be inclusive of the diversity of educational research and scholarship, and welcomes members from a wide range of disciplinary backgrounds, theoretical orientations, methodological approaches, sectoral interests and institutional affiliations. It also encourages the development of productive relationships with other associations within and beyond the UK.

Aspiring to be the home of all educational researchers in the UK, BERA provides opportunities for everyone active in this field to contribute through its portfolio of distinguished publications, its world-class conference and other events, and its active peer community, organised around 30 special interest groups. We also recognise excellence in educational research through our range of awards. In addition to our member-focussed activity, we aim to inform the development of policy and practice by promoting the best quality evidence produced by educational research.

About the British Curriculum Forum

The British Curriculum Forum (BCF) aims to bring together all those with an interest in collaborative curriculum, research and development.

Through events, awards and grants, the BCF supports communication and collaboration in the study and practical implementation of the curriculum in schools, colleges and wider educational settings. Connecting schools, colleges, universities and others, our work promotes the study of theoretical, innovative and practical aspects of the curriculum, drawing on a rich history, spanning more than 40 years, and continuing the tradition of research and development founded by Lawrence Stenhouse.

The British Curriculum Forum is the successor to the British Curriculum Foundation which was incorporated into BERA in 2014. The BCF has been in existence for over 40 years (and was previously known as the Association for the Study of Curriculum).

The BCF aims to:

- promote the study of theoretical, innovative and practical aspects of the curriculum
- provide an authoritative medium through which the opinions of teachers and others may be expressed on matters of the curriculum
- provide means of communication amongst all those concerned with the study of the curriculum and/or its practical implementation
- enable BERA to connect with schools
- enable practitioners to engage with research.

Contents

Editorial: A research approach to curriculum development.....	3
<i>Sarah Seleznyov & Gerry Czerniawski</i>	
1. Contextualising and conceptualising the curriculum.....	7
<i>Dominic Wyse</i>	
2. How can the process of concept mapping shape powerful knowledge and curriculum evaluations?	12
<i>Michelle Murray, Vanessa McManus & Gemma Norman</i>	
3. Evaluating the impact of a dilemma-led curriculum on the engagement and outcomes of children in receipt of pupil premium	14
<i>Tina Farr & Clare Whyles</i>	
4. A connected approach to mathematics learning: The Cambridge Mathematics Framework.....	15
<i>Dominika Majewska</i>	
5. Knowledge organisers within a challenge-based curriculum.....	17
<i>Lisa Worgan</i>	
6. The curriculum design coherence model.....	18
<i>Richard Pountney</i>	
7. How mobile technology became a catalyst for transformational change: Gibraltar's Story	19
<i>Sonia Montiel Lopez</i>	
8. Curriculum complexity and personalisation	20
<i>Jeanette Scull</i>	
9. Pinkwell Primary School: A globally immersive curriculum for 21st century global citizens	22
<i>Rachel Jacob & Lara Ginn</i>	
10. The words into writing study: Making words stick for EAL learners	24
<i>Jasen Booton</i>	
11. Plenary session: Group discussions and critical reflection.....	26
<i>Arlene Holmes-Henderson</i>	
Afterword	31
<i>Sarah Seleznyov</i>	

Published in March 2020 by the British Educational Research Association

British Educational Research Association (BERA)

9–11 Endsleigh Gardens
London WC1H 0EH

www.bera.ac.uk
enquiries@bera.ac.uk
020 7612 6987

Charity Number: 1150237

Download

This document is available to download from:

<https://www.bera.ac.uk/publication/a-research-approach-to-curriculum-development-a-british-curriculum-forum-event-report>

Citation

If referring to or quoting from this document in your own writing, our preferred citation is as follows.

Selezniov, S., & Czerniawski, G. (Eds.) (2020). *A research approach to curriculum development: A British Curriculum Forum event report*. London: British Educational Research Association. Retrieved from <https://www.bera.ac.uk/publication/a-research-approach-to-curriculum-development-a-british-curriculum-forum-event-report>

Permission to share

This document is published under a creative commons licence:

Attribution-NonCommercial-NoDerivs 2.0 UK
<http://creativecommons.org/licenses/by-nc-nd/2.0/uk/>

For commercial use, please contact publications@bera.ac.uk



EDITORIAL

A RESEARCH APPROACH TO CURRICULUM DEVELOPMENT

SARAH SELEZNYOV & GERRY CZERNIAWSKI
BRITISH CURRICULUM FORUM

The British Curriculum Forum (BCF)¹ aims to bring together all those with an interest in collaborative curriculum, research and development. Through events, awards and grants, the Forum supports communication and collaboration in the study and practical implementation of the curriculum in schools, colleges and wider educational settings. Connecting schools, colleges, universities and others, our work promotes the study of theoretical, innovative and practical aspects of the curriculum, drawing on a rich history spanning more than 40 years, and continuing the tradition of research and development founded by Lawrence Stenhouse.

About the event

On 15 November 2019 an all-day event was held at Alfred Salter Primary School in Rotherhithe, London, to support teachers actively seeking and exploring means of developing their own institutional curricula. The aim of the event was to create a context in which curriculum development could be meaningfully developed, reviewed, shared and discussed. The day included:

- presentations on curriculum concepts and research approaches adopted by teachers in schools
- participants sharing their current practice, with each school presenting their recent work related to developing the curriculum
- discussions about approaches to and the challenges of curriculum development.

1 <https://www.bera.ac.uk/community/british-curriculum-forum>

Programme of the event, 'A Research Approach to Curriculum Development', Alfred Salter Primary School, Rotherhithe, London, 15 November 2019

09.30	Registration, tea and coffee
10.00	Welcome, introductions, plans for the day <i>Gerry Czerniawski</i>
10.15	Contextualising and conceptualising the curriculum <i>Dominic Wyse</i>
10.30	Participants present their posters on curriculum development (eight minutes each), plus Q&A
12.30	Lunch
13.20	Enhancing teachers' engagement with a research approach to curriculum development <i>Ruth Luzmore</i>
13.50	Perspectives on researching the curriculum: Developing and sustaining a research approach to shaping, implementing and considering the impact of the curriculum-focussed discussion groups Facilitators: <i>Dominic Wyse, Sarah Seleznyov, & Arlene Holmes-Henderson</i>
14.50	Next steps <i>Gerry Czerniawski</i>
15.00	Close of meeting

About this report

After the event we invited all participants to send in short summaries of their presentations and of the work they are carrying out in relation to collaborative curriculum, research and development. This published collection presents and celebrates those wonderful contributions.

We start this report with a short article from the day's opening speaker, **Dominic Wyse** of the UCL Institute of Education. Dominic focusses on the place of knowledge in the context of curricula, both nationally and internationally, and how this is linked to the enactment of curriculum in schools.

Michelle Murray, Vanessa McManus and Gemma Norman (Education Learning Trust) present work examining the ways in which the process of concept mapping can shape powerful knowledge and curriculum evaluations.

Tina Farr and Clare Whytes (St Ebbe's Church of England [Aided] Primary School) write about a project in which they sought to engage the parents of children in receipt of pupil premium funding in order to encourage greater participation and better attendance – issues that they did not believe the current drive for a knowledge-based curriculum would address. The authors evaluate the impact of a dilemma-led curriculum on the engagement and outcomes of these children.

Dominika Majewska (Cambridge Mathematics) presents the Cambridge Mathematics Framework, designed to be a common frame of reference for those in mathematics education, curriculum design and resource and assessment development as well as those in teaching.

For the last five years, Victoria Park Primary Academy in Smethwick has run a challenge-based approach to learning, underpinned by theories from John Dewey's project-based learning. We learn more about this exciting work from a piece by **Lisa Worgan** (Victoria Academies Trust).

Auckland University, Sheffield Hallam University, and Keele and North Staffordshire Teacher Education are collaborating to develop a curriculum design tool that informs an appreciation of subject coherence and develops teachers' curriculum design expertise. Writing about this project, **Richard Pountney** (Sheffield Hallam University) presents initial findings which suggest that separating subject concepts, subject content and subject competencies enables teachers to effectively design the curriculum using the logical order imposed by the curriculum design coherence model.

Mobile technology was the catalyst that inspired teachers at St Bernard's Primary in Gibraltar to unleash their creativity to transform pedagogy and redesign learning tasks as part of a holistic 21st century curriculum. We learn more of this work from headteacher **Sonia Montiel Lopez**.

As a practitioner for learners with complex needs, **Jeanette Scull's** professional experience is that specialist practice has been negatively affected by the dominance of models of curriculum centred on 'entitlement' to the national curriculum in both special and mainstream English schools. Jeanette, in her summary, presents ideas arising from her emerging case study on developing an engagement-driven curriculum.

Rachel Jacob and Lara Ginn (respectively principal and vice principal for curriculum at Pinkwell Primary School, part of the Elliot Foundation Academy Trust) write about their work in relation to a globally immersive curriculum for 21st century global citizens. Their school, Pinkwell Primary School in Hayes, west London, sits within an area of high socioeconomic deprivation, and 89 per cent of its pupils use English as an additional language (EAL).

Finally, **Jasen Booton** was prompted by the dearth of research exploring the writing process for EAL children, both within the UK context and internationally, to conduct his fascinating study of vocabulary development and usage in narrative writing.

The day's closing session provided a forum for reflection and small group discussion. Members of the BCF steering group (Sarah Seleznyov, Gerry Czerniawski, Dominic Wyse and Arline Holmes-Henderson)

facilitated discussion around a stimulus question for each of the four groups of participants. In the final piece in this collection, **Arlene Holmes-Henderson** (University of Oxford) summarises these discussions with reference to the contributions that each group made on the day.

1. CONTEXTUALISING AND CONCEPTUALISING THE CURRICULUM

DOMINIC WYSE
PRESIDENT, BERA

The curricula that teachers and pupils enact in classrooms, and the curricula that schools pursue, are influenced to varying degrees in different countries by their national curricula. The strength of this influence depends on how national curricula are conceived and written, but also on the ways in which schools interpret them. In recent years the influence of international comparative assessments – such as the Progress in Reading Literacy Study (PIRLS, organised by the International Association for the Evaluation of Educational Achievement) and the Programme for International Student Assessment (PISA, run by the Organisation for Economic Co-operation and Development) – on education policymakers has grown.

However, another influence on and context for the enactment and academic study of curriculum is more longstanding: knowledge in the curriculum. This article focusses on the place of knowledge in the context of curricula, both nationally and internationally, and traces some links with the enactment of curriculum in schools.

I recently carried out some work (with my colleague Yana Manyukhina) for Ireland's National Council for Curriculum and Assessment: an analysis of knowledge in the curricula of a selection of countries that are relatively high-performing in international comparative assessments. In addition to being highly ranked, countries were selected on the basis of some other similarities with the Irish education context (for more details see Manyukhina & Wyse, 2019). The overall purpose of the work was to recommend how knowledge might be defined and articulated, as part of wider work that Ireland was doing on a redeveloped primary curriculum. That curriculum had remained largely unchanged since 1999, and Ireland has consistently performed well in the international assessments. This perhaps offers lessons for England here in terms of the frequency with which changes have been made to its national curricula, and the approach taken towards those changes.

The four countries/regions selected for analysis can be seen in table 1.1. All four were performing above the average in both PISA and PIRLS; Hong Kong was notable for its particularly high ranking against both assessments.

Table 1.1

Outcomes of the PIRLS and PISA assessments for four countries/regions for 'reading literacy' (PIRLS; children tested at age 10) and 'reading performance' (PISA; tested at age 15), both 2016

Country/ region	PIRLS rank	PISA rank	PIRLS average scale score	PISA mean score	PIRLS standard error
Hong Kong	3	2	569	527	2.7
England (PIRLS) / UK (PISA)	10	22	559	498	1.9
Australia	21	16	544	503	2.5
Ontario, Canada	23	3	543	527	1.8

Note: countries/regions were selected on the basis of, for PIRLS, scoring significantly higher than the centre of the scale and, for PISA, scoring significantly above OECD average.

Our research included content and discourse analyses that identified the ways in which the four countries conceptualised knowledge in their curricula, and the ways in which knowledge was defined and emphasised. The national curriculum texts selected for analysis were as follows.

- **Australia:** *Australian Curriculum: Learning Areas; Australian Curriculum: General Capabilities; Australian Curriculum: Cross-Curriculum Priorities.*
- **Ontario, Canada:** Ontario curriculum subject guides.
- **Hong-Kong:** *Basic Education Curriculum Guide.*
- **England:** *National curriculum in England: Framework document.*

One of the outcomes of our research was the identification of three different models of national curriculum organisation.

- **Knowledge-based:** knowledge is the dominant organisational emphasis across the curriculum as a whole (example: England).
- **Skills-oriented:** skills are an important consideration, particularly in relation to applying knowledge, which remains an important element (examples: Australia and Ontario).
- **Learner-oriented:** the dominant organising emphasis is on the learner, including whole-person development and lifelong learning. This was accompanied by an explicit recognition that a bias towards an emphasis on knowledge is undesirable (example: Hong Kong).

A key implication of our findings was that all four countries were relatively successful in the international comparative tests despite working with quite different curriculum models. These models included the learner-oriented curriculum of Hong Kong – it may come as a surprise to some that a learner-oriented curriculum can be so successful.

At the time we carried out the research, Ofsted had posted a blog that identified some possible models that schools might wish to think about (Spielman, 2018). This responded to Ofsted's recent encouragement to schools to think more about the whole curriculum, after more than a decade of an overriding focus on English and mathematics that was due in part to the pressures of statutory national assessments linked to school assessments. We compared Ofsted's models with ours (see table 1.2).

Table 1.2

A comparison of curriculum models

National Curricula (Manyukhina & Wyse)		School Curricula (Amanda Spielman, Ofsted)
Knowledge-based	↔	Knowledge-led approach
Skills-oriented	↔	Knowledge-engaged
	↗	Skills-led
Learner-centred	-----→	<i>Absent from Spielman classification</i>

Sources: Manyukhina & Wyse (2019) vs Spielman (2018)

As can be seen in table 1.2, a learner- or child-centred model of curriculum was not suggested by Ofsted. This is perhaps a legacy of the history of critiques of child-centred education in England. Since 1988, successive national curriculum policies in England, enforced by Ofsted, have diminished the influence of elements such as pupil choice, pupil voice and pupil agency in their curricula. Children's right to participate in all matters that affect them – which is enshrined in the UN Convention on the Rights of the Child – does not seem to have been applied to the development of England's national curriculum.

The proposal that national curricula should be child-centred can sometimes be met with incredulity, and even skepticism about whether it is possible to articulate a child-centred national curriculum. However, as demonstrated above, Hong Kong clearly found a way to do this. There are also examples much closer to home: as you can see in table 1.3, Scotland's Curriculum for Excellence explicitly frames the child and their voice as central features of the curriculum (Scottish Government, 2011).

Even the two words 'enjoyment' and 'choice', which are part of the requirements across the whole curriculum, seem revolutionary when compared with England's 2014 national curriculum. And these words are not just brief rhetorical flourishes as part of the opening remarks about a subject area: they are themes that run through the programmes of study in the Curriculum for Excellence. In the context of what is perhaps one of the most contested areas of the curriculum – literacy – we also note the emphasis on pupils 'creating texts of [their] choice', and the requirement to 'regularly select subject, purpose, format and resources' (Scottish Government, 2011).

Table 1.3

An extract from Scotland's Curriculum for Excellence

Writing					
	Early	First	Second	Third	Fourth
Enjoyment & choice – within a motivating and challenging environment, developing an awareness of the relevance of texts in my life.	I enjoy exploring and playing with the patterns and sounds of language and can use what I learn.	I enjoy creating texts of my choice and I regularly select subject, purpose, format and resources to suit the needs of my audience.		I enjoy creating texts of my choice and I am developing my own style. I can regularly select subject, purpose, format and resources to suit the needs of my audience.	

Source: Scottish Government (2011)

During the event that inspired this publication, one of the many things that impressed me about the presentations from schools concerning their curricula was the serious attention that was being paid to children. For example, one school had developed a systematic approach to regularly consulting pupils on how their curriculum was enacted, and was sharing this approach with other schools that they were in partnership with. I noted also the freedoms that academy schools were exercising – something which is much more difficult for non-academy schools.

The current context in England, where thinking about whole-school curriculum development is once again being encouraged, perhaps gives schools some new opportunities. My colleague Ruth Dann, until recently one of the co-ordinators of the BERA Curriculum, Pedagogy and Assessment special interest group, emphasises the need for schools to take a research-based approach to curriculum that can be broken down into four elements.

1. Selecting the problem to address.
2. Identifying issues in relation to your school.
3. Identifying dilemmas and possible choices.
4. Making decisions.

I would add, further to these, 'Rigorously evaluating evidence of what worked and what didn't work once the decisions have been made and the new practice enacted'.

In addition to a research-based approach, schools may also want to focus on the following ideas:

- asking children about the curriculum they want
- overarching principles that might guide a school curriculum
- the most important things children should understand by the time they leave primary school

- the pros and cons of thematic planning
- identifying things to be explored that are unique to the needs and interests of the school community
- where material that is additional to the national curriculum might fit in the school curriculum.

Some of the issues addressed in this article may seem rather distant from the everyday concerns of teachers and schools – yet national curricula, and their associated assessment systems, do have a powerful influence on schools. While the daily demands of teaching are many, it is also important, when the opportunity arises, to contribute to initiatives that seek better national curricula.

References

- Manyukhina, Y., & Wyse, D. (2019). Learner agency and the curriculum: A critical realist perspective. *Curriculum Journal*, 30(3), 223–243.
- Scottish Government (2011). *Curriculum for Excellence: Literacy and Gàidhlig: Experiences and outcomes*. Edinburgh. Retrieved from <https://education.gov.scot/Documents/literacy-gaidhlig-eo.pdf>
- Spielman, A. (2018, September 18). HMCI commentary: Curriculum and the new education inspection framework [blog post]. Retrieved from <https://www.gov.uk/government/speeches/hmci-commentary-curriculum-and-the-new-education-inspection-framework>
- Wyse, D. (2019, December 9). What next for curriculum? [blog post]. Retrieved from <https://www.bera.ac.uk/blog/what-next-for-curriculum>

2. HOW CAN THE PROCESS OF CONCEPT MAPPING SHAPE POWERFUL KNOWLEDGE AND CURRICULUM EVALUATIONS?

MICHELLE MURRAY, VANESSA MCMANUS & GEMMA NORMAN

EDUCATION LEARNING TRUST (REPRESENTING GATLEY, BREDBURY GREEN & MEADOWBANK PRIMARY SCHOOLS)

Within its core values of collaboration, empowering and achievement, the Education Learning Trust² is constantly exploring ways in which synergy and autonomy can be achieved and promoted for its individual schools. This is essential, as each school is not only in a contrasting demographic position but also at a unique point on its school improvement journey. The Trust's core values embody how staff and pupils learn and engage within their learning environment. The revised Ofsted framework provided the ideal opportunity for each school to conduct a peer review in relation to curriculum. Key principles were born out of this process in order to form a trust charter which places pupils at the heart of the curriculum- and decision-making process.

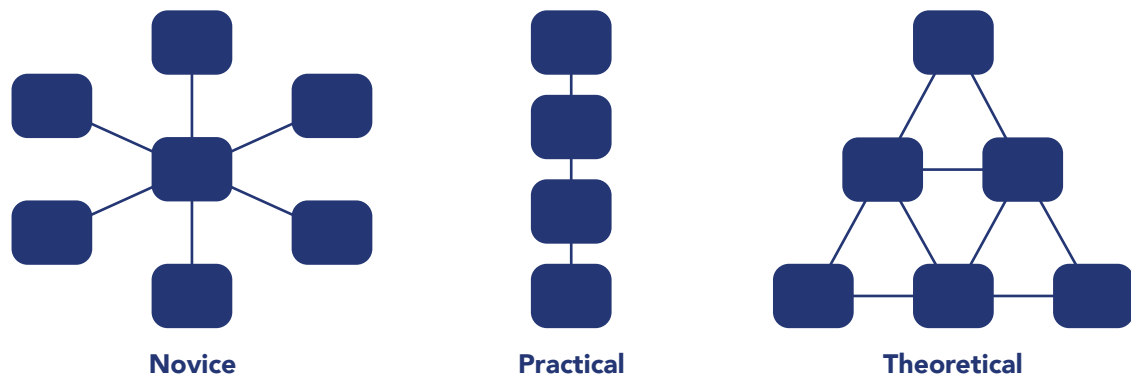
The Trust's learning charter also set out how pupil voice and agency are at the core of curriculum design and construction. As a value, it supports synergy across the Trust. However, there appears to be a significant gap in policy documents: they fail to appreciate or understand the importance of pupil voice and agency in curriculum design and evaluation. The research conducted across our multi-academy trust proposes to explore whether the process of concept mapping can act as a visual tool to support pupils' ability to articulate the 'powerful knowledge' they acquire as an approach to supporting pupils to 'see how they are putting ideas together (or not) and diagnose their own difficulties' (Kinchen, Möllits, & Reiska, 2019, p. 4).

Across multiple phases, pupils will compile a concept map through the journey of a historical unit. The pupils will be asked a key question at the mid-point and end of a unit of work in a focus group forum. The responses from the focus group will be 'scored' using a rubric that will grade:

- the correctness of the concepts identified
- the ways in which these concepts are organised (see figure 2.1)
- the overall comprehensiveness of the map (Besterfield-Sacre, Gerchak, Lyons, Shuman, & Wolf, 2004).

2 <https://www.educationlearningtrust.com>

Figure 2.1
Forms of concept maps



Source: adapted from Kinchen (2019, p. 3)

References

- Besterfield-Sacre, M., Gerchak, J., Lyons, M., Shuman, L., & Wolf, H. (2004). Scoring concept maps: An integrated rubric for assessing engineering education. *Journal for Engineering Education*, 93(2), 105–115.
- Kinchen, I., Möllits, A., & Reiska, P. (2019). Uncovering types of knowledge in concept maps. *Education Sciences*, 9(131), 1–14.

3. EVALUATING THE IMPACT OF A DILEMMA-LED CURRICULUM ON THE ENGAGEMENT AND OUTCOMES OF CHILDREN IN RECEIPT OF PUPIL PREMIUM

TINA FARR & CLARE WHYLES
ST EBBE'S CHURCH OF ENGLAND (AIDED) PRIMARY SCHOOL

We sought to engage the parents of our pupils in receipt of pupil premium in order to encourage greater participation and better attendance. We were unconvinced that the current drive for a knowledge-based curriculum would address these issues.

Working with Dr Debra Kidd, we committed to a project-based curriculum as rich in humanity as in knowledge. By developing real and fictional narratives around people, places, problems and possibilities, children become emotionally invested in their learning and are more likely to retain knowledge. Each of our projects ended with a learning exhibition through which children communicated their knowledge to parents and visitors. For instance, year 3 children built a reproduction of a cave, which included wall paintings, and led visitors through it. We have systematically collected written and oral evaluation data from children, parents and teachers. The analysis revealed improved levels of concentration, higher quality writing, an ability to speak knowledgeably to an audience and increased parent participation in attending project outcomes.

Figure 3.1

The stone age cave, built by year 3 pupils for parents to visit as part of the project, 'What do humans need? Do we need art and why?'



4. A CONNECTED APPROACH TO MATHEMATICS LEARNING

THE CAMBRIDGE MATHEMATICS FRAMEWORK

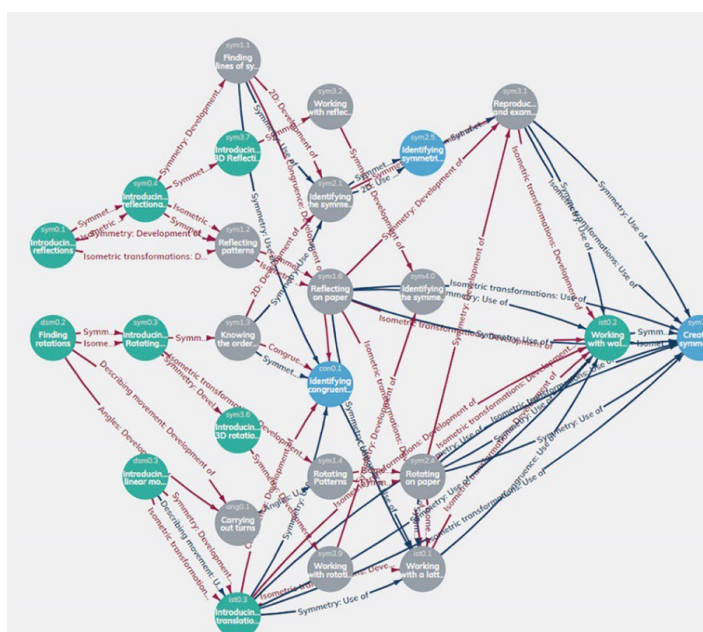
DOMINIKA MAJEWSKA
CAMBRIDGE MATHEMATICS

The Cambridge Mathematics Framework is designed to be a common frame of reference for those in mathematics education, curriculum design and resource and assessment development, as well as in teaching (Jameson, 2019). Investigations of the current climate in mathematics education reveal a lack of connections in the way in which mathematics teaching and learning occurs, and the difficulties of working with linear structures that do not emphasise connectivity between concepts.

Connectedness has therefore been one of the key principles driving the development of the Framework. It contains waypoints ('places where learners acquire knowledge, familiarity or expertise about a mathematical idea'), which are connected by edges (connections between waypoints describing either the development or the use of a concept, skill or procedure) (Cambridge Mathematics, 2019). It is, therefore, a flexible, interconnected network of mathematical concepts underpinned by research and evidence.

Figure 4.1

A visual from the Cambridge Mathematics Framework



References

- Cambridge Mathematics. (2019). Key terms in Framework documentation [webpage]. Retrieved from <https://www.cambridgemaths.org/research/key-terms-in-framework-documentation/>
- Jameson, E. (2019). *Background for the case study micro-report series*. Cambridge: Cambridge Mathematics. Retrieved from <https://www.cambridgemaths.org/Images/case-study-micro-report-series-background.pdf>

5. KNOWLEDGE ORGANISERS WITHIN A CHALLENGE-BASED CURRICULUM

LISA WORGAN
VICTORIA ACADEMIES TRUST

Victoria Park Primary Academy in Smethwick has, over the last five years, implemented a challenge-based approach to learning underpinned by theories from John Dewey's project-based learning (PBL). We want to ensure that foundation subject content knowledge is broad, deep and high quality, and that the learning challenges allow pupils to apply their understanding effectively and in the real world. We have introduced a knowledge organiser to set out crucial declarative and procedural knowledge, schema, vocabulary and the pedagogical approach of the learning challenge.

Monitoring has observed

- learning objectives arising from identified knowledge
- prior and new vocabulary more specifically learned and applied
- clearer sequences of learning.

Plans for next steps include the following.

- Ensuring that pupils are able to articulate their understanding of key concepts across all subjects.
- A focus on pupil schemata when effectively planning, building spirals in pupil learning.
- Developing pupils who are knowledgeable, empowered, active, collaborative, creative and enterprising citizens

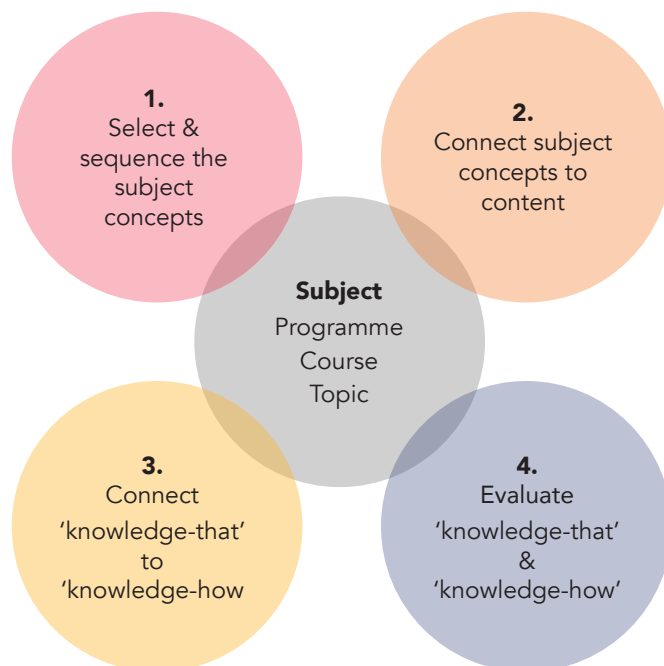
Although it is unusual to use knowledge organisers in this way – they are normally used only to set out a whole load of declarative knowledge and facts that children must learn – they are being developed from action-based practice within the teaching pedagogy of the school. We are using knowledge organisers to set out procedural and declarative knowledge and to outline the pedagogy being used.

6. THE CURRICULUM DESIGN COHERENCE MODEL

RICHARD POUNTNEY
SHEFFIELD HALLAM UNIVERSITY

Auckland University, Sheffield Hallam University, and Keele and North Staffordshire Teacher Education are collaborating to develop a curriculum design tool (Rata, 2019) that informs an appreciation of subject coherence and develops teacher curriculum design expertise. Our initial findings suggest that separating subject concepts, subject content and subject competencies enables teachers to effectively design the curriculum using the logical order imposed by the Curriculum Design Coherence (CDC) model. These distinctions can be made clear to students through specialised curriculum language. As a longitudinal model, and as a logic, the CDC approach contributes to and promotes curriculum thinking. It works on the basis that the curriculum is the progression model, enabling teachers to identify powerful knowledge as the hooks for a spiral curriculum that provides a strong narrative for learning and teaching.

Figure 6.1
The Curriculum Design Coherence model



Source: adapted from an image by Elizabeth Rata & Graham McPhail

References

Rata, E. (2019). Knowledge-rich teaching: A model of curriculum design coherence. *British Educational Research Journal*, 45(4), 681–697

7. HOW MOBILE TECHNOLOGY BECAME A CATALYST FOR TRANSFORMATIONAL CHANGE

GIBRALTAR'S STORY

SONIA MONTIEL LOPEZ

DEPARTMENT OF EDUCATION, GIBRALTAR & UNIVERSITY OF GIBRALTAR

Mobile technology was the catalyst that inspired teachers at St Bernard's Primary School to unleash their creativity, transforming pedagogy and redesigning learning tasks as part of a holistic 21st century curriculum. Project-based learning emerged as an excellent platform on which to bring 21st century skills and themes to the forefront. The versatility of the iPad, together with its accessibility features, enabled a higher degree of personalisation within each learning task. Puentedura's substitution, argumentation, modification and redefinition (SAMR) model (2012) was employed by teachers within collaborative planning sessions to reflect on their current practice and ensure a move towards transformational learning experiences rather than remaining in the 'substitution' phase of technology application. The success of PBL cycles in developing 21st century skills has led to Gibraltar's Ministry of Education announcing that a technology-led and skills-orientated approach would be a key impulse for education moving forward.

Figure 7.1

A crusader for transformational change, St Bernard's Primary School



Reference

Puentedura, R. R. (2012). *The SAMR Model: Background and Exemplars*. Retrieved from http://www.hippasus.com/rrpweblog/archives/2012/08/23/SAMR_BackgroundExemplars.pdf

8. CURRICULUM COMPLEXITY AND PERSONALISATION

JEANETTE SCULL

JFK SPECIAL SCHOOL, LEARNING IN HARMONY TRUST, NEWHAM

As a practitioner for learners with complex needs, my professional experience is that specialist practice has been negatively affected by the dominance of models of curriculum centred on 'entitlement' to the national curriculum in both special and mainstream English schools.

Teachers generally see entitlement in terms of fixed curriculum arrangements rather than the statutory 'broad and balanced' requirement. This means that, for complex learners, curriculum is a limited domain met by differentiation to a norm rather than personalisation. For specialist teachers this message was strengthened over time by the use, from 2009 to 2011, of the Department for Education's progression guidance materials (DfE, 2009), which outlined the importance of attainment data linked to national curriculum levels of progress. These materials were incorporated into Ofsted inspections, and the result was a backwash effect on curriculum, in terms of both content and teachers' confidence and sense of agency with respect to curriculum for more complex learners.

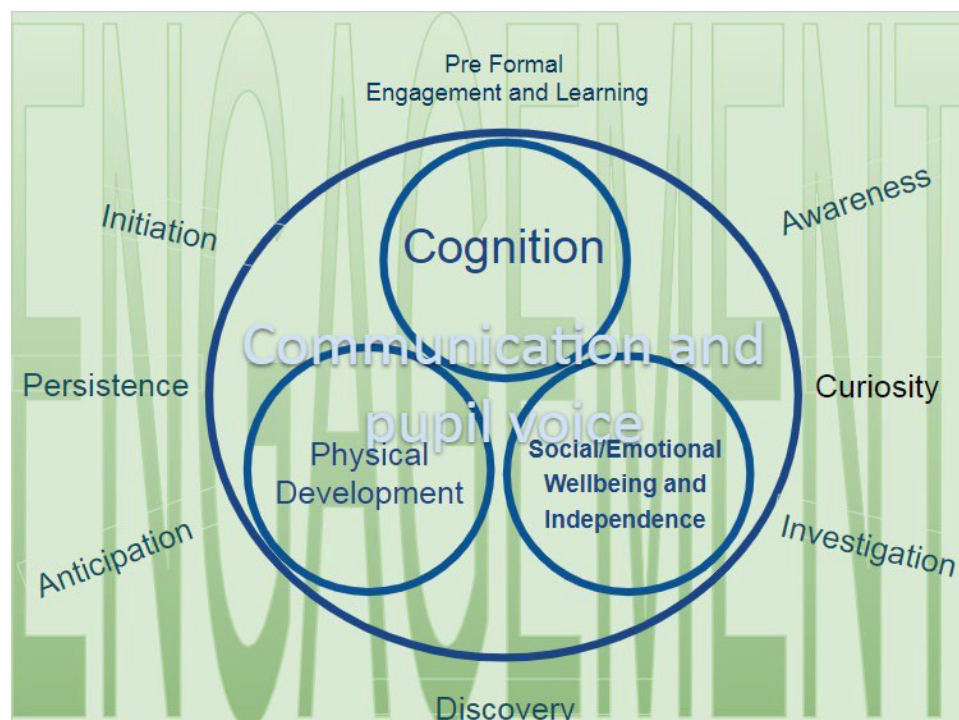
Critics of national curriculum models as a universal offer frequently cite the gap between, on the one hand, the subject and content of the curriculum and the associated prescribed expectations and, on the other, the complexity and diversity of individual learner needs (Price, 2015, p. 19), 'difficulties with specific formulations' (Corbett & Norwich, 1998, p. 86), and disregarded important areas of human experience (Crawford, 2000, p. 619).

Some believe that the national curriculum model presents a challenge to delivering educational outcomes for learners who are outside of typical development or are not neurotypical. The implications of teachers trying to demonstrate unrecognised achievement within a perceived rigid assessment framework, alongside an expectation of curriculum progression, have broadened over time. Issues around curriculum implementation include the 'potential effects of social disadvantage' (Pantic & Florian, 2015, p. 334), 'continual curriculum and pedagogical adaptation' (Price, 2015, p. 22) and the growth of 'differentiation' with its 'different uses and associations' (Corbett & Norwich, 1998, p. 87) rather than personalisation and a holistic assessment arrangement.

This research offers a case study in developing an engagement-driven curriculum. It poses the following research question: To what extent do teachers feel confidence and agency in implementing personalised curricula?

Figure 8.1

The JFK Special School pre-formal curriculum pathway



References

- Crawford, K. (2000). The political construction of the whole curriculum. *British Educational Research Journal*, 26(5), 615–630.
- Corbett, J., & Norwich, B. (1998). The contribution of special education to our understanding of the values of schooling and the curriculum. *Curriculum Studies*, 6(1), 85–96.
- Department for Education [DfE] (2009). *Progression Guidance 2009–10*. Retrieved from <https://webarchive.nationalarchives.gov.uk/20110809182945/http://wsassets.s3.amazonaws.com/ws/nso/pdf/8072ae6665f3a3568667710628f6a239.pdf>
- Pantic, N., & Florian, L. (2015). Developing teachers as agent of inclusion and social justice. *Education Enquiry*, 6(3).
- Price, D. (2015). Pedagogies for inclusion of students with disabilities in a national curriculum: A central human capabilities approach. *Journal of Educational Enquiry*, 14(2), 18–32.

9. PINKWELL PRIMARY SCHOOL

A GLOBALLY IMMERSIVE CURRICULUM FOR 21ST CENTURY GLOBAL CITIZENS

RACHEL JACOB & LARA GINN

PINKWELL PRIMARY SCHOOL, ELLIOT FOUNDATION ACADEMY TRUST

Pinkwell Primary School is located within an area of high socioeconomic deprivation. The community is very transient, resulting in a constantly changing cohort of pupils. Furthermore, 89 per cent of Pinkwell pupils speak English as an additional language; many of them arrive at Pinkwell with no English, limited schooling and from areas of instability.

Pinkwell is thus faced with many challenges. The school currently requires improvement. Action research and related curriculum development are central to the school's rapid change, growth and future success. Our curriculum intent is to develop pupils who are:

- adventurers and explorers of learning
- independent and interdependent learners
- creative and critical thinkers
- effective communicators.

The creation of the curriculum began with the voices, experiences and aspirations of pupils. Pinkwell's diverse community fosters global citizens of the world with a deep knowledge and understanding of:

- identity and diversity
- our wondrous planet
- humans' journey to today
- the interconnected world
- global citizenship
- humans' responsibility to care for the planet.

Throughout, pupils build 'cultural capital' through actual and virtual experiences and human connections. At Pinkwell, the children's subject-specific knowledge and skills are developed through a project-based learning approach. This approach is driven by an enquiry question – 'real life and virtual experiences' – through which we seek to deepen the pupils' understandings and build cultural capital, promote pupil-led investigation and create a public product. This public product gives a real-life context and meaning to the learning, and draws many subjects together in a cohesive, purposeful way.

Figure 9.1
The Pinkwell Primary School logo



10. THE WORDS INTO WRITING STUDY

MAKING WORDS STICK FOR EAL LEARNERS

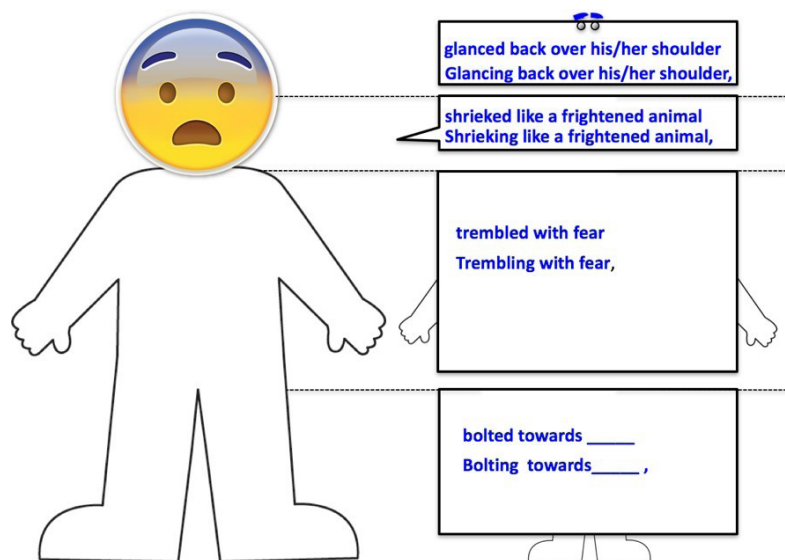
JASEN BOOTON
UNIVERSITY OF OXFORD

The paucity of research exploring the writing process for children with English as an additional language (EAL), both within the UK context and internationally (Murphy, 2014), prompted this study of vocabulary development and use in narrative writing. The study focussed on year 4 second-language learners in two primary schools in the English West Midlands, placing significant emphasis on developing EAL children's vocabulary depth (Smith & Murphy, 2015; Castillo & Tolchinsky, 2018). The study demonstrated the positive effect that learning target vocabulary in 'word (lexical) bundles' had on EAL pupils, boosting their language and literacy skills (Wray, 2008; Cameron & Besser, 2004). Its results suggested that a blended and contextualised pedagogical approach, with frequent multimodal exposure to target words, led to greater control of sentence structure, showing elaboration and a sense of flair. Pedagogical elements included: reading aloud, drama techniques, semantic linking and sentence combining.³

The action figure: supporting language linking and thinking

Figure 10.1

An example of how the action figure was used in practice



3 An animated visual summary of this study can be viewed at <https://vimeo.com/372070010>

This innovative resource was the vehicle that brought all the pedagogical elements together. The action figure supports learners to think about target words that describe the actions of a scared character, prompting them to combine 'word bundles' in different ways in order to craft more detailed and complex sentences.

References

- Cameron, L., & Besser, S. (2004). *Writing in English as an additional language at key stage 2* (Research Report No. 586). Nottingham: Department for Education and Skills.
- Castillo, C., & Tolchinsky, L. (2018). The contribution of vocabulary knowledge and semantic orthographic fluency to text quality through elementary school in Catalan. *Reading and Writing, 31*(2), 293–323.
- Murphy, V. (2014). *Second language learning in the early school years*. Oxford: Oxford University Press.
- Smith, S. A., & Murphy, V. A. (2015). Measuring productive elements of multi-word phrase vocabulary knowledge among children with English as an additional or only language. *Reading and Writing, 28*(3), 347–369.
- Wray, A. (2008). *Formulaic language: Pushing the boundaries*. Oxford: Oxford University Press.

11. PLENARY SESSION

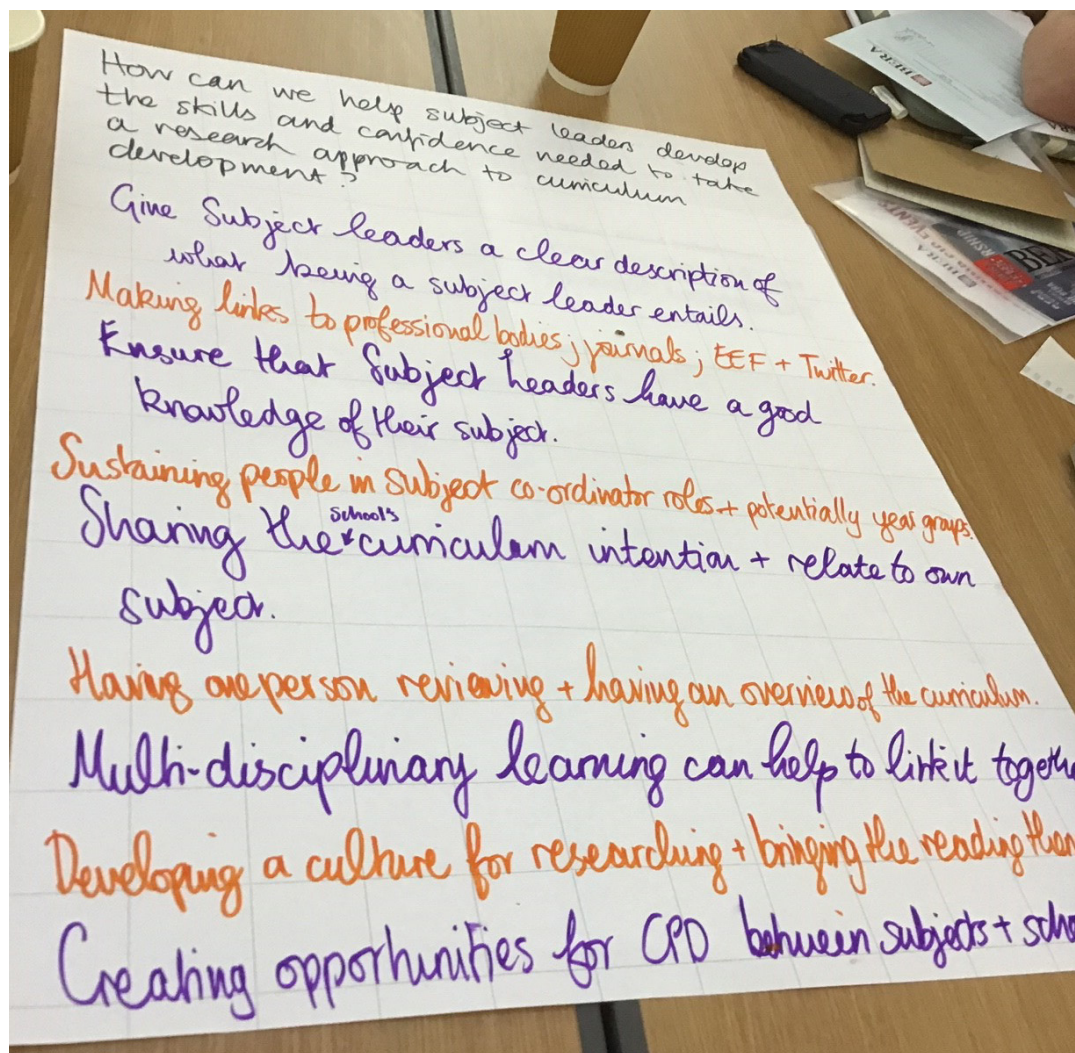
GROUP DISCUSSIONS AND CRITICAL REFLECTION

ARLENE HOLMES-HENDERSON
UNIVERSITY OF OXFORD

The final session of the day provided a forum for reflection and small group discussion. Four members of the BCF steering group (Sarah Seleznyov, Gerry Czerniawski, Dominic Wyse and I) facilitated discussion around a stimulus question for each of the four groups of participants. The group responses can be seen in the flip-chart images below (figures 11.1–11.4).

Figure 11.1

Responses to the question, 'How can we support subject leaders to develop the skills and confidence required to take a research approach to curriculum development?'

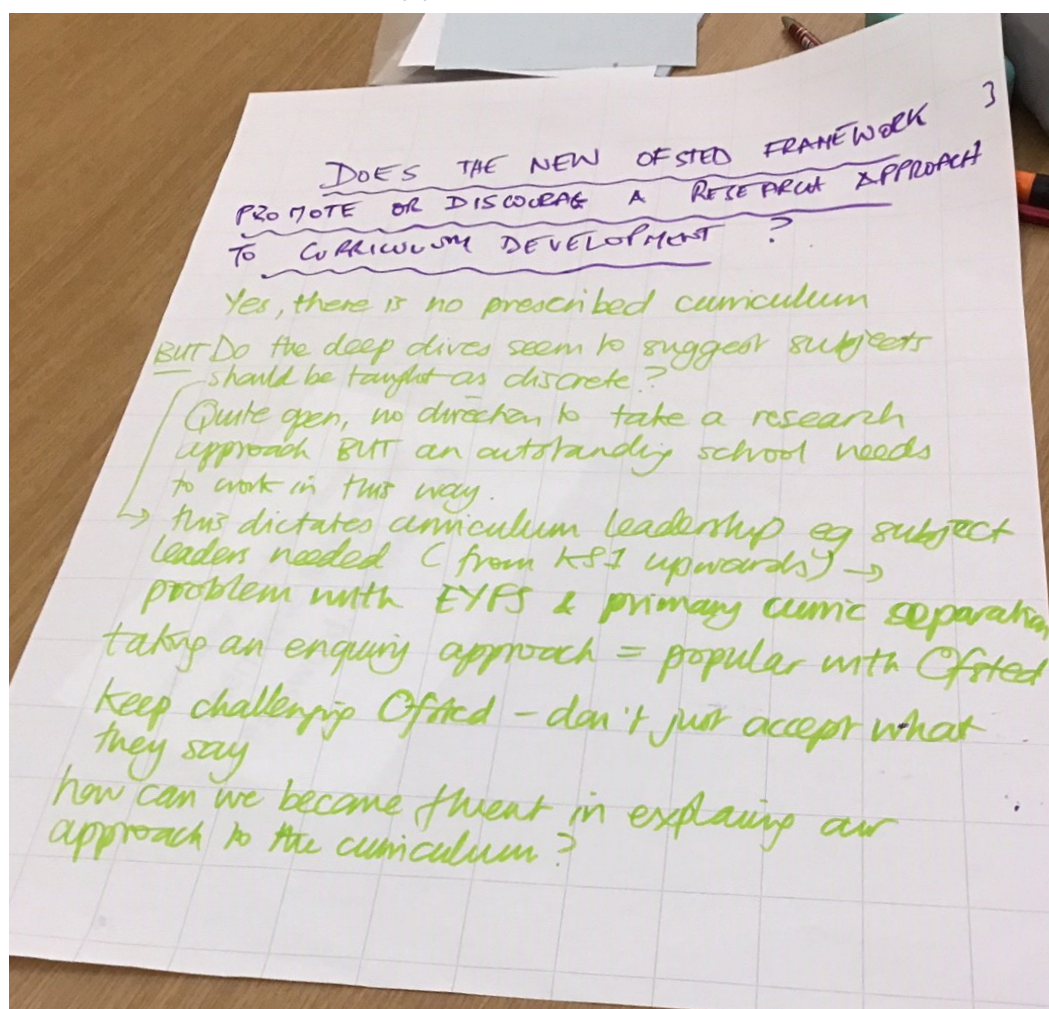


One question asked participants to consider how we can support subject leaders to develop the skills and confidence required to take a research approach to curriculum development. It was clear from the myriad of suggestions provided that attendees at the event have been personally engaged in this very task and have developed a range of successful strategies. The three key suggestions were as follows.

1. Recruit and retain the right people as subject leaders.
2. Get the school culture right.
3. Provide opportunities for continuing professional development (the best are often free, or low-cost).

Figure 11.2

Responses to the question, 'Does the new Ofsted framework promote or discourage a research approach to curriculum?'



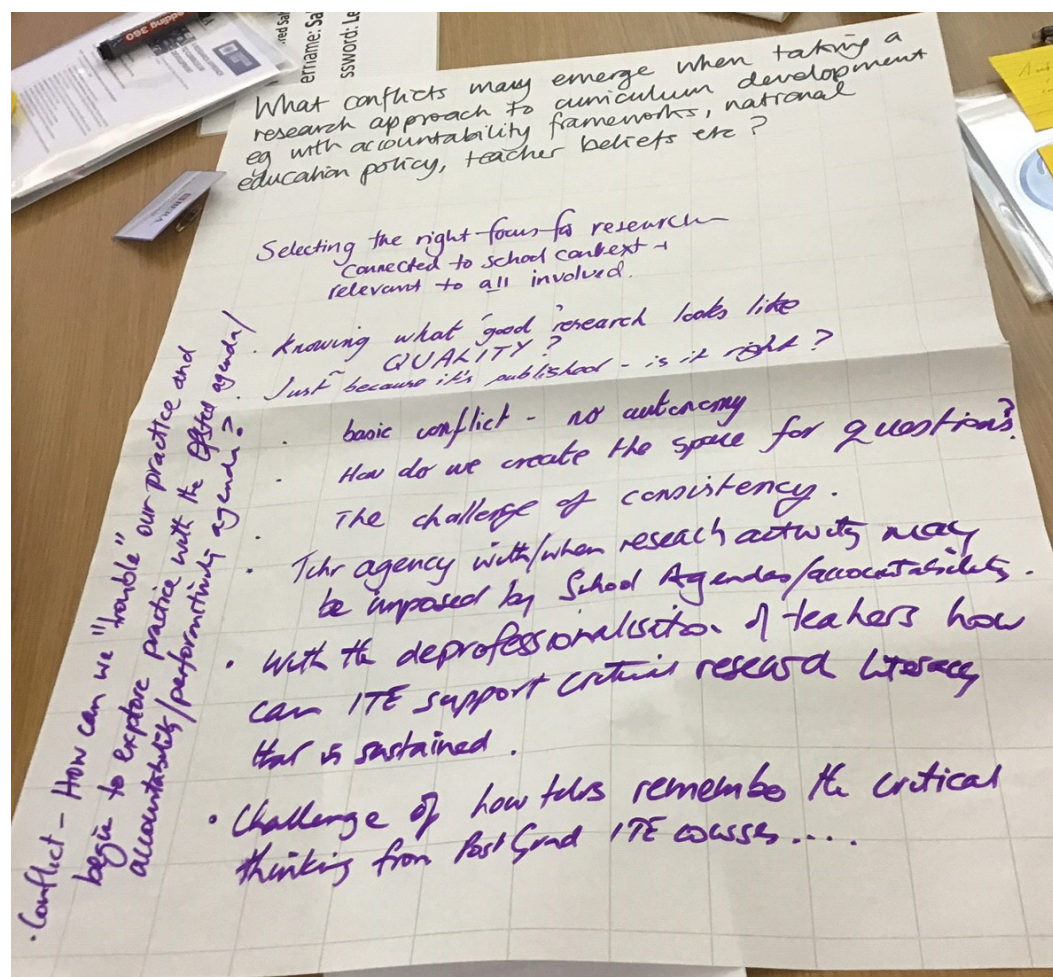
Another question asked participants to consider whether the new Ofsted framework promotes or discourages a research approach to curriculum. This generated a great deal of discussion – Ofsted always does! Teachers agreed that while the flexibility of the new framework does not require

any particular approach to curriculum, curriculum is accorded greater importance than ever. Teachers, as critical readers of research, agreed that they should engage in critical dialogue with Ofsted and not use the new framework as the only driver of their approach to curriculum.

What I found most striking from this discussion was attendees' desire to become 'more fluent in explaining our approach to the curriculum'. This, I think, is a valid point. There is a language of curriculum, just as there is a language of assessment and of inclusion. This event provided a strong starting point for sketching the basics of academic terminology around curriculum development. The BCF will look at how we can do more in this area, in order to bridge the gap between professional practice and academic fluency.

Figure 11.3

Identified instances in which conflicts may arise between researching the curriculum and other professional responsibilities

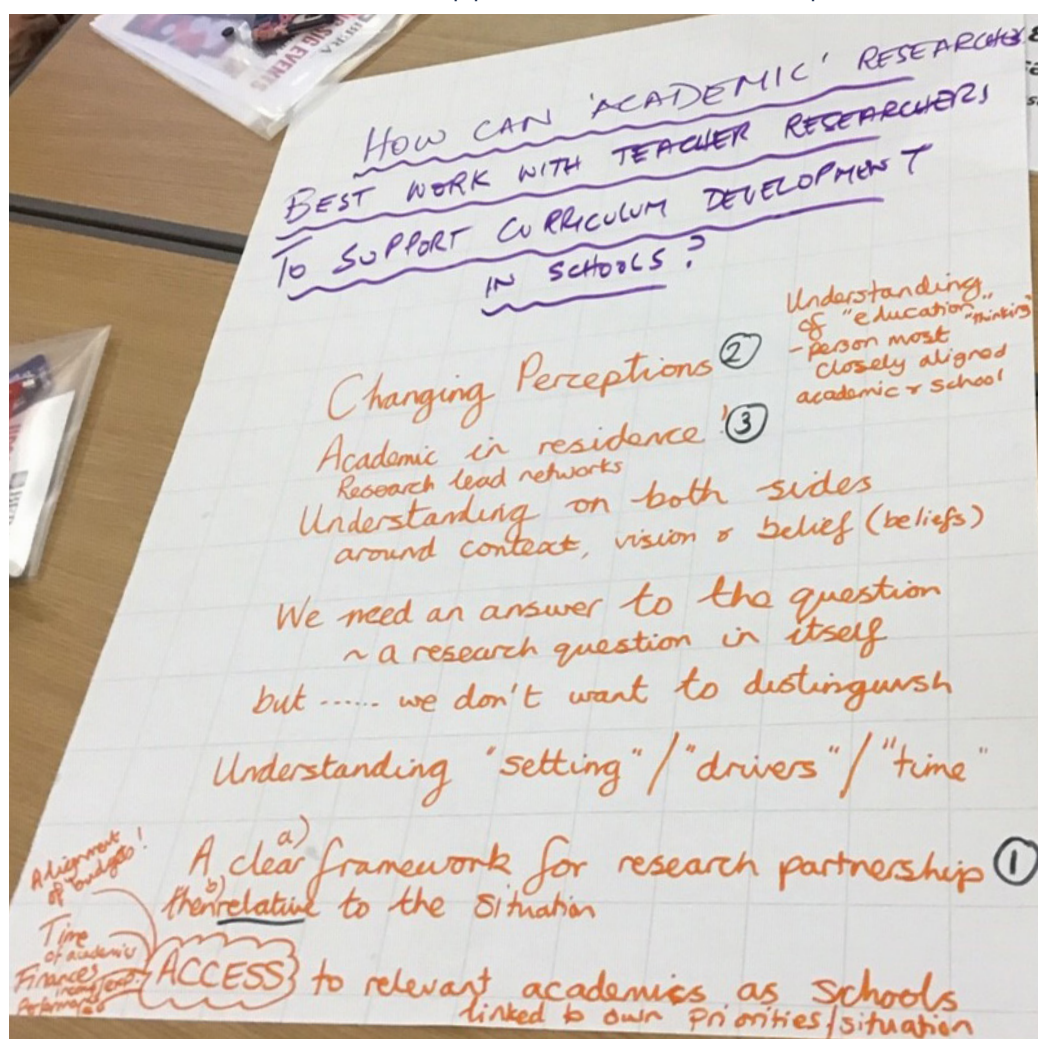


Participants were asked to consider when conflicts may arise between researching the curriculum and other professional priorities. The group considering these issues identified many inevitable conflicts, but they highlighted the following three as the most troubling.

1. Teacher agency is reduced when the focus for research is chosen by school leaders.
2. It is difficult to balance the quality of research with the consistency of research.
3. Complications often occur when professional practice is the focus of teacher research, yet the same practice is also assessed for accountability and performance-related pay.

Figure 11.4

Responses to the question, 'How can "academic" researchers best work with teacher researchers to support curriculum development in schools?'



Finally, one group was asked to consider how academic researchers can best work with teacher researchers to support curriculum development in schools. They identified the need to define a clear framework for collaboration, including budgets, timescales and the frequency of visits. The 'academic in residence' model was discussed, as this has the potential to help both schools and universities (the latter in terms of the Research Excellence Framework impact agenda). I led this discussion, and as an academic I could definitely see the benefit to my research of this approach!

This final group discussion session wove together a number of individual threads from throughout the day. I was impressed by how bravely participants faced the challenges that are inevitable when researching the curriculum in school settings. The BCF steering group was delighted with the feedback we gathered on the day, and we will use these comments to inform our future event planning.

AFTERWORD

SARAH SELEZNYOV
LONDON SOUTH TEACHING SCHOOL ALLIANCE
CHARLES DICKENS PRIMARY SCHOOL

For those of us who work in schools, Ofsted's recent shift towards a focus on curriculum is both promising and fraught with challenges. Making something an Ofsted priority sometimes distorts school activity in a way that benefits neither teachers nor pupils, as schools scramble to please the inspectorate instead of focussing on their pupils, community and staff.

Add to this the fact that, for the research-engaged school, curriculum research is challenging territory: it is largely a theoretical field, and it raises huge questions about the nature of learning and teachers' beliefs. Do schools have time to engage their staff in such debates, or should they instead move quickly to practical solutions?

However, the schools at this event demonstrated that teachers can make sense of curriculum theory and apply it to find practical and supportive solutions to problems of practice that are built around pupils' needs and interests. The event also showed that curriculum researchers can interface productively with schools, offering practical guidance to help them plan and implement their curricula.

